Generate Collection | Print

L12: Entry 2 of 17 File: USPT Jun 26, 2001

US-PAT-NO: 6252405
DOCUMENT-IDENTIFIER: US 6252405 B1

TITLE: Temperature compensated NMR magnet and method of operation therefor

DATE-ISSUED: June 26, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Watkins; Ronald Dean	Niskayuna	NY		
Barber; William Daniel	Ballston Lake	NY		
Frischmann; Peter George	Ballston Spa	NY		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
General Electric Company	Schenectady	NY			02

APPL-NO: 09/ 440813 [PALM]
DATE FILED: November 15, 1999

INT-CL: [07] G01 V 3/00

US-CL-ISSUED: 324/319; 324/320, 324/315
US-CL-CURRENT: 324/319; 324/315, 324/320

FIELD-OF-SEARCH: 324/319, 324/320, 324/321, 324/318, 324/300, 324/314, 324/307, 324/309, 324/315

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected | Search ALL

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐	3714553	January 1973	Keller	324/318
☐	4870380	September 1989	McGinley	335/296
☐	4943774	July 1990	Breneman et al.	324/318
☐	4952877	August 1990	Stormont et al.	324/312
☐	4992736	February 1991	Stormont et al.	324/309
☐	5214383	May 1993	Perlmutter et al.	324/313
☐	5252924	October 1993	Sakurai et al.	324/320
☐	5334937	August 1994	Peck et al.	324/318
☐	5382905	January 1995	Miyata et al.	324/319
☐	5431165	July 1995	Sellers	128/653.5
☐	5592090	January 1997	Pissanetzky	324/319
☐	5680086	October 1997	Allis et al.	335/296
☐	5731704	March 1998	Schnur et al.	324/320
☐	5774034	June 1998	Yoneda et al.	335/301
☐	6037775	March 2000	Shenoy et al.	324/320

ART-UNIT: 282

PRIMARY-EXAMINER: Arana; Louis

ABSTRACT:

An MRI system includes a magnet which produces the main polarizing magnetic field. Variations in strength of this field are corrected by a temperature compensation system that calculates a compensating flux needed to maintain the field at constant strength. The compensating flux is calculated from changes in sensed magnet temperature and a magnet temperature coefficient. One or more correction coils are wound around the magnet and driven with the current necessary to produce the compensating flux.

14 Claims, 4 Drawing figures